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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/752,731
				Filing Date	01/03/01
				First Named Inventor	Lawrence Loomis
				Group Art Unit	1616
				Examiner Name	Dameron Levest Jones
Sheet	1	of	11	Attorney Docket Number	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
[Handwritten marks]	1	US- 8058954	05/02/00	Fischetti, et al.	
	2	US- 5997862	12/07/99	Fischetti, et al.	
	3	US- 5985271	11/16/99	Fischetti, et al.	
	4	US- 5888501	11/18/97	Merril, et al.	
	5	US- 4742981	05/10/88	Converse	
	6	US- 2019789	11/05/35	Mahannah	
	7	US- 2763931	08/25/56	McMillan	
	8	US- 5479732	01/02/96	Burtch, et al.	
	9	US- 3465445	09/09/69	Fisher	
	10	US- 2315260	03/30/43	Lancaster	
	11	US- 5804109	02/18/97	Fischetti, et al.	
	12	US- 5280292	11/09/93	Robinson, et al.	
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	16	US- 3852424	12/03/74	Gaeumann, et al.	
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	19	US- 6248324	08/19/01	Fischetti, et al.	
	20	US- 6238661	05/29/01	Fischetti, et al.	

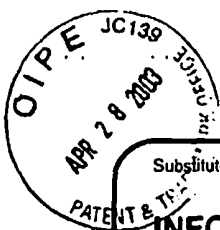
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Country Code ⁴ - Number ⁴ - Kind Code ⁵ (if known)				
[Handwritten marks]	21	EP-0510907 A 2	10/28/92	Agricultural & Food Res.		
	22	WO-9702351	01/23/97	CIBA Geigy AG, et al.		
	23	WO-9607329	03/14/96	Univ. Maryland		
	24	WO-9904809	02/04/99	Ambi, Inc.		
	25	FR-2357246	02/03/78	Martinez		
	26	WO-9531562	11/23/95	Quest International B.V.		
	27	EP-587541 A1	03/16/94	Tecnogen ScpA		

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³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



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Sheet 2 of 11

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First Named Inventor	Lawrence Loomis
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Examiner Name	Dameron Levest Jones
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RJ	28	US- 6056955	05/02/00	Fischetti, et al.	
	29	US- 5882631	03/16/99	Suga, et al.	
	30	US- 5741487	04/21/98	Asai, et al.	
	31	US- 6113887	09/05/00	Mori, et al.	
	32	US- 4122158	10/24/78	Schmitt	
	33	US- 3983209	09/28/76	Schmitt	
	34	US- 4885163	12/05/89	Shaar, et al.	
	35	US- 6177554	01/23/01	Woo, et al.	
	36	US- 6187757	02/13/01	Cackson, et al.	
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	38	US- 6335012	01/01/02	Fischetti, et al.	
	39	US- 6326002	12/04/01	Fischetti, et al.	
	40	US- 6277399	08/21/01	Fischetti, et al.	
	41	US- 4062941	12/13/77	Davies	
	42	US- 5571687	11/05/96	Chu, et al.	
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	44	US- 5500350	03/19/96	Baker, et al.	
	45	US- 5384265	01/24/95	Kidwell, et al.	
	46	US- 4361537	11/30/82	Deutsch, et al.	
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RJ	48	WO-9323544	11/25/93	The University Court of the University of Glasgow		
	49	EP-0293249 A1	11/30/88	Amrad Corporation Limited		
	50	EP-0646646 A2	04/05/95	Bristol-Myers Squibb Company		
	51	EP-0359873 A1	03/28/90	The Public Health Research Inst. of the City of New York		

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Group Art Unit				1616	
Examiner Name				Dameron Levest Jones	
Attorney Docket Number					
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A	52	US-4948726	08/14/80	Longoria	
	53	US- 4450361	07/10/84	Geffer	
	54	US- 4552839	11/12/85	Gould, et al.	
	55	US- 4313734	02/02/82	Leuvinger	
	56	US- 4847199	07/11/89	Snyder, et al.	
	57	US- 4497900	02/05/85	Abram, et al.	
	58	US- 4707543	11/17/87	Zollinger, et al.	
	59	US- 5763251	06/09/98	Gasson	
	60	US- 6159688	12/12/00	Borchert, et al.	
	61	US- 4784948	11/15/88	Scott, et al.	
	62	US- 5760026	06/02/98	Blackburn, et al.	
	63	US- 5602040	02/11/97	May, et al.	
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	66	US- 4115546	09/19/78	Vidra, et al.	
	67	US- 4116327	09/26/78	Eglinton, et al.	
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	69	US- 6083684	07/04/00	Gasson	
	70	US- 5380617	11/01/94	Gasson	
	71	US- 5079174	01/07/92	Buck, et al.	

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	72	US- 5604110	02/18/97	Baker, et al.	
	73	US- 5294369	03/15/94	Shigekawa, et al.	
	74	US- 5372931	12/13/94	Friedman, et al.	
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	79	US- 3622677	11/23/71	Short, et al.	
	80	US- 4369308	01/18/83	Trubiano	
	81	US- 5393656	02/28/95	Olsen	
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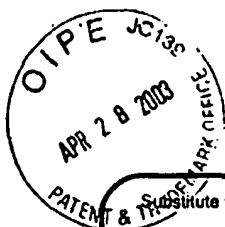
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		First Named Inventor	Lawrence Loomis
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		Examiner Name	Dameron Levest Jones
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
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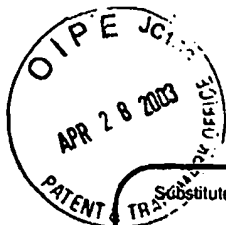
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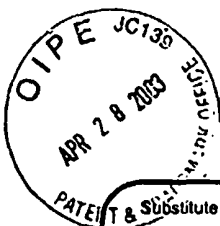
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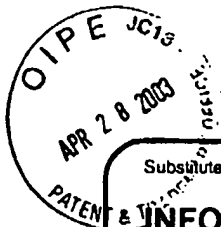
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Examiner Signature		Date Considered	
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 10 of 11

Complete if Known

Application Number	09/752,731
Filing Date	01/03/01
First Named Inventor	Lawrence Loomis
Group Art Unit	1616
Examiner Name	Dameron Levest Jones
Attorney Docket Number	

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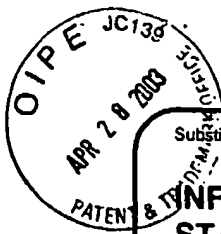
OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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	128	SHEEHAN, et al., Analysis of the catalytic domain of the lysis of the lactococcal bacteriophage Tuc2009 by chimeric gene assembling; FEMS Microbiology Letters, 1996, pp. 23-28, Vol. 140	
	129	SHEEHAN, et al., The lytic enzyme of the pneumococcal phage Dp-1: A chimeric lysis of intergeneric origin, Molecular Microbiology, 1997, pp. 717-725	
	130	WITTE, et al., Characterization of escherichia coli lysis using a family of chimeric E-L genes, FEMS Microbiology Letters, 1998, pp. 159-167, Vol. 164	
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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/752,731
				Filing Date	January 3, 2001
				First Named Inventor	Lawrence Loomis
				Group Art Unit	1616
				Examiner Name	Jones, Dameron Levest
Sheet	11	of	11	Attorney Docket Number	

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U.S. PATENT DOCUMENTS					
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		Number - Kind Code ² (if known)			
[Signature]	133	US-5605793	02/25/97	Stemmer	
	134	US- 6355477	03/12/02	Fischetti et al	
	135	US- 6331405	12/18/01	Rambukkana et al	
	138	US- 6190659	02/20/01	Pancholi et al	
	137	US- 5985654	11/16/99	Fischetti et al	
	138	US- 5842314	11/24/98	Scott et al	
	139	US- 5910441	08/08/99	Rocha et al	
	140	US- 5786205	07/28/98	Fischetti et al	
	141	US- 5976792	11/02/99	Cheung et al	
	142	US- 5821088	10/13/98	Darzens et al	
	143	US- 5723303	03/03/98	Fischetti et al	
	144	US- 5643767	07/01/97	Fischetti et al	
[Signature]	145	US- 5707822	01/13/98	Fischetti et al	
	146	US- 5618686	04/01/97	Fischetti et al	
	147	US- 5604109	02/18/97	Fischetti et al	
	148	US- 5587288	12/24/96	Cheung et al	
	149	US- 5558944	09/17/96	Fischetti et al	
	150	US- 5352588	10/04/94	Fischetti et al	
	151	US- 5968763	10/19/99	Fischetti et al	
	152	US- 4784948	11/15/88	Scott et al	

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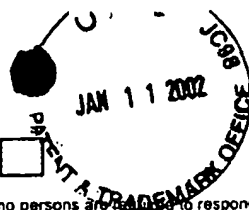
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/752,731
		Filing Date	1/3/01
		First Named Inventor	Loomis et al
		Group Art Unit	1618-1416
		Examiner Name	Bawa, R. Jones
Sheet 1 of 5	Attorney Docket Number		

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
DA		6,264,945		Fischetti et al.	07-24-2001	
		6,254,866		Fischetti et al.	07-03-2001	
		6,248,324		Fischetti et al.	06-19-2001	
		6,238,661		Fischetti et al.	05-29-2001	
		6,056,955		Fischetti et al.	05-02-2000	
		6,056,954		Fischetti et al.	05-02-2000	
		6,017,528		Fischetti et al.	01-25-2000	
		5,997,862		Fischetti et al.	12-07-1999	
		5,985,271		Fischetti et al.	11-06-1999	
		5,688,501		Merril et al.	11-18-1997	
		4,957,686		Norris	09-18-1990	
		5,604,109		Fischetti et al.	02-18-1997	
		5,882,631		Suga et al.	03-16-1999	
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		6,113,887		Mori et al.	09-05-2000	
		4,122,158		Schmitt	10-24-1978	
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		4,885,163		Shaar et al.	12-05-1989	

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FOREIGN PATENT DOCUMENTS							
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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DA			WO 97 02351 A		CIBA GEIGY AG, et al.	01-23-1997	
			WO 96 07329 A		UNIV. MARYLAND	03-14-1996	
			EP 0 510 907 A		AGRICULTURAL & FOOD RES	10-28-1992	
			WO 99 04809 A		AMBI INC	02-04-1999	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet **3** of **5**

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Application Number

Filing Date

First Named Inventor

Group Art Unit

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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		Reisenger, et al. (1998) "Characterization of Escherichia coli lysis using a family of chimeric E-L Genes" <i>Fems Microbiol Letter.</i> 164(1) p.159-167	
		Sheehan MM, et al. (1997) "The lytic enzyme of the Pneumococcal Phage Dp-1: a chimeric lysis of intergeneric origin." <i>Mol. Microbiol.</i> 25(4) p. 717-725	
		Young et al. (2000) "Phages will out: strategies of host cell lysis." <i>Trends in Microbiology.</i> 8(4) p. 120-127	
		Garcia et al.(1997) "The Pneumococcal cell wall degrading enzymes: A modular design to create new lysins?" <i>Microb. Drug Resist.</i> 3(2): p. 199-211	
		Sheehan MM, et al., (1997) "The Lytic Enzyme of the Pneumococcal Phage Dp-1: a Chimeric Lysin of Intergeneric Origin" <i>Mol. Microbiol.</i> 25(4) p. 717-25	
		Garcia P, et al. (1997) "Bacteriophages of Streptococcus pneumoniae: a molecular approach" <i>Microb. Drug Resist.</i> 3(20) 165-76.	
		Sheehan, MM, et al.(1996) "Analysis of the catalytic domain of the lysin of the lactococcal bacteriophage Tuc2009 by chimeric gene assembling." <i>FEMS Microbiol.Lett.</i> 14(1): p. 23-28.	
		Sanz, JM, et al. (1996) "Construction of a multifunctional pneumococcal murein hydrolase by module assembly." <i>Eur. J. Biochem.</i> 235(3):601-5	
		Lopez R, et al. (1995) "Architecture and Domain Interchange of the Pneumococcal Cell Wall Lytic Enzymes" <i>Dev. Biol. Stand.</i> 85 p. 273-81.	

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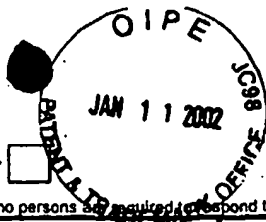
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	
		Filing Date	
		First Named Inventor	
		Group Art Unit	1619/1610
		Examiner Name	Bawa Jones
Sheet 4 of 5	Attorney Docket Number		

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
DS		Croux, et al.(1993) "Interchange of Functional Domains Switches Enzymes Specificity: Construction of a chimeric pneumococcal-clostridial cell wall lytic enzyme." <i>Mol. Microbiology</i> . 9(5) p. 1019-25.	
		Diaz, E. et al. (1990) "Chimeric phage-bacterial enzymes: a clue to the modular evolution of genes. <i>PNAS</i> . 87(20) p. 8125-9.	
		Diaz, E. et al.(1990) "Chimeric pneumoccal cell wall lytic enzymes reveal important physiological and evolutionary traits." <i>J. Biol. Chem.</i> 266(9) p. 5464-71.	
		Lopez, et al. (1997) "The pneumococcal cell wall degrading enzymes: A modular design to create new lysins?" <i>Microbiological Drug Resistance</i> , 3(2) p. 199-211.	
		Loessner, et al. (1999) "Evidence for a holin-like protein gene fully embedded out of frame in the endolysin gene of <i>Staphylococcus aureus</i> Bacteriophage." (1999) <i>Journal of Bacteriology</i> , 181(15) p. 4452-4460.	
		Witte, A et al. (1998) "Characterization of <i>Escherichia coli</i> lysis using a family of chimeric E-L genes." <i>FEMS Microbiol. Lett.</i> , 164(1), p. 159-167	
		Martin, Ana C et al (1998): "Functional analysis of the two-gene lysis system of the pneumococcal phage Cp-1 in homologous and heterologous host cells." <i>Journal of Microbiology</i> 180(2), p. 210-217	
		Oki Masaya et al. (1997) "Functional and structural features of the holin HOL protein of the <i>Lactobacillus plantarum</i> phage phi-gle: Analysis in <i>Escherichia coli</i> system." <i>Gene (AMSTERDAM)</i> 197(1-2) p 137-145.	

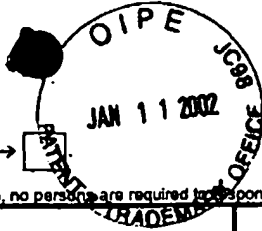
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	
		Filing Date	
		First Named Inventor	
		Group Art Unit	1619 / 1618
		Examiner Name	BAWA Jones
Sheet 5 of 5	Attorney Docket Number		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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		Young, Ry et al. (2000) "Phages will out: strategies of host cell lysis." <i>Trends in Microbiology</i> , 8(3) p 120-127.	
		Nelson, et al. (2001) "Prevention and elimination of upper respiratory colonization of mice by Group A Streptococci by using a bacteriophage lytic enzyme." <i>PNAS</i> . 98 (7) p. 4107-4112	
		Garcia, et al. (1987) "Purification and biochemical characterization of the pneumococcal bacteriophage Cp-1 lysin." <i>Journal of Virology</i> 61(8) p. 2573 - 2580.	
		Loessner, et al. (1996) "Modified Listeria bacteriophage lysin genes (ply) allow efficient overexpression and one-step purification of biochemically active fusion proteins." <i>Applied and Environmental Microbiology</i> . 62(8) p. 3057-3060	

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